

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA**

IN RE: AQUEOUS FILM-FORMING FOAMS
PRODUCTS LIABILITY LITIGATION

MDL No.
2:18-mn-2873-RMG

JOE LANGER;

Plaintiff,

-vs -

TYCO FIRE PRODUCTS, LP, individually and as
successor in interest to The Ansul Company;
CHEMGUARD, INC., CHEMDESIGN, INC., and THE
3M COMPANY, f/k/a Minnesota Mining and
Manufacturing Co.,

Defendant.

)
) 2:24-cv-01238 -RMG
)
) **COMPLAINT**
)
) **Jury Trial Demanded**

COMPLAINT

Plaintiff, JOE LANGER, by and through his undersigned counsel, Napoli Shkolnik PLLC, hereby file this Complaint, and make these allegations based on information and belief against Defendants TYCO FIRE PRODUCTS, LP, individually and as successor in interest to The Ansul Company; CHEMGUARD, INC., CHEMDESIGN, INC., THE 3M COMPANY, f/k/a Minnesota Mining Manufacturing Co. (“Defendants”):

INTRODUCTION

1. Wisconsin has 11,451 public water systems, the largest number of any state. The majority of Wisconsin’s public water systems rely on groundwater pumped from wells. About 4 in 10 Wisconsin homes get their water from private wells. Residents of the communities receive their potable water either from private wells or from their municipal water provider.¹

¹ Wisconsin Department of Natural Resources, Bureau of Drinking Water and Groundwater, Wisconsin Public Water Systems 2017 Annual Drinking Water Report <https://dnr.wi.gov/files/PDF/pubs/DG/DG0045.pdf>.

2. Marinette County is located in Northeast Wisconsin on the shores of Green Bay bordering the Upper Peninsula of Michigan. Marinette has a population of about 10,000 and gets water from Green Bay.

3. Marinette County has 8 municipal water systems: Coleman Waterworks, Crivitz Waterworks, Goodman Sanitary District No. 1, Marinette Waterworks, Niagara Waterworks, Peshtigo Waterworks, Pound Waterworks and Wausaukee Waterworks (the “Communities”).²

4. The regional groundwater flow direction in the Marinette area is generally east toward Green Bay.

5. The Ansul Fire Technology Center (“AFTC” or the “Site”) is an active fire suppressant training, testing, research and development facility in Marinette, Wisconsin currently owned and operated by Defendant Tyco Fire Products L.P. (“Tyco”).

6. Since the early 1960’s, aqueous film-foaming foam (“AFFF”) has been manufactured, tested and/or used at the AFTC facility as part of research, development, quality testing and firefighting training activities.

7. AFFF is used to control and extinguish flammable liquid fires. Per- and polyfluoroalkyl substances (“PFAS”) such as perfluorooctanoic acid (“PFOA”) and/or perfluorooctanesulfonic acid (“PFOS”) have been present in these foams manufactured, tested and/or used at the AFTC.

8. On May 2, 2012, the United States Environmental Protection Agency’s (“USEPA”) published its Third Unregulated Contaminant Monitoring Rule (“UCMR3”) which required public water systems nationwide to monitor for thirty (30) contaminants of concern between 2013 and 2015.

² <https://wi.water.usgs.gov/gwcomp/find/marinette/watersystems.html>

9. The UCMR3 Rule included the requirement that public water systems sample for six perfluorinated compounds (“PFCs”), including PFOA and PFOS.

10. In October 2015, the USEPA released the results from UCMR3 which indicated the Communities’ water supplies were contaminated with PFOA and PFOS.

11. Prior to the disclosure of the UCMR3 data, there was no notification to the residents of the Communities that the water was contaminated with the carcinogenic chemicals PFOA and PFOS.

12. In May 2016 the USEPA established a drinking water health advisory level (HAL) of 70 parts per trillion (“ppt”) (0.07 μ g/l) for the combined concentration of PFOA and PFOS.

13. As a result of the establishment of the 70 ppt health advisory level, the Communities’ water suppliers were forced to take action, including notifying the public, to reduce the PFOA/PFOS levels in the drinking water. Such actions including shutting down wells, obtaining and/or purchasing alternative sources of water, and blending clean water with contaminated water to lower the level of PFCs in their customers’ water.

14. Defendants have been manufacturing AFFF and/or using it for training activities for over for over 50 years in Marinette County.

15. AFFF containing PFAS were discharged, disposed of, or released from the AFTC and onto lands and/or water in the vicinity of Plaintiff’s property.

16. The highest levels of PFOA and PFOS in groundwater in Wisconsin have been detected at the AFTC. Reported concentrations are as high as 202 μ g/l (micrograms per liter) –

2,800 times higher than the USEPA's Health Advisory Level of only 0.07 µg/l for the compounds combined.³

17. 3M was the sole manufacturer of AFFF containing PFOS in the United States, meaning the source of the PFOS contamination discovered at the AFTC could only have been the use and testing of 3M's AFFF products.

18. As a direct and proximate result of Defendants' acts and omissions, Plaintiff has suffered injury and damages from the presence of PFAS in their water wells.

JURISDICTION AND VENUE

19. Pursuant to this Court's Case Management Order No. 3, this Complaint is filed as an original action in the United States District Court for the District of South Carolina.

20. Pursuant to 28 U.S.C. § 1391, Plaintiff's Home Venue is the United States District Court for the Eastern District of Wisconsin.

21. This Court has jurisdiction pursuant to 28 U.S.C. § 1332 (a) because the parties are diverse and the amount in controversy exceeds \$75,000.

22. This Court has personal jurisdiction over Defendants by virtue of Defendants' regular and systematic contacts with Wisconsin, including, among other things, purposefully marketing, selling and/or distributing their AFFF/Component Products to and within Wisconsin, and because Defendants have the requisite minimum contacts with Wisconsin necessary to constitutionally permit the Court to exercise jurisdiction over Defendants consistent with traditional notions of fair play and substantial justice.

³ Citizens For Safe Water Around Badger, *Wisconsin to Address PFOA/PFOS and other Groundwater Contaminants*. <https://cswab.org/wisconsin-to-address-pfoa-pfos-and-other-groundwater-contaminants> (last visited September 24, 2018).

23. For purposes of the claims alleged in this Complaint, the Eastern District of Wisconsin shall be the home venue, defined as the proper venue of origin where the claim could have otherwise been brought pursuant to 28 U.S.C. § 1391.

THE PARTIES

Plaintiff

24. Plaintiff **Joe Langer** is a former resident of Marinette, Wisconsin, who currently resides at 3650 Ulmcrest Ct. Green Bay, WI 54301. Mr. Langer resided at N2936 Green Gable Road, Marinette, WI 54143 from 1958 – 1974. Upon moving out in 1974, Mr. Langer regularly visited the property every year from 1975 until present. Mr. Langer drank water at N2936 Green Gable Road, Marinette, WI 54143 every day from 1958 – 1974, and every time he visited from 1975 – present. The property currently receives water from a private well. PFCs, including but not limited to PFOS, have entered the water, property and soil, including but not limited to through the accumulation in the pipes, faucets, showerheads, and appliances, as well as through watering the lawn. On January 24, 2018, private well sampling results at N2936 Green Gable Road confirmed the presence of PFOA at 410 ppt and PFOS at 7.9 PPT, with a total detected (PFOA + PFOS) of 417.9 ppt. Plaintiff Langer has been exposed to elevated levels of PFCs through Plaintiff's water and has a bioaccumulation of PFCs in his blood. As a result of his exposure to PFCs in the contaminated water supply, Mr. Langer has been diagnosed with testicular cancer and prostate cancer. Mr. Langer is also at an increased risk of developing several health conditions, including but not limited to effects on the liver and immune system, high cholesterol levels, changes in thyroid hormone, and kidney cancer.

DEFENDANTS

25. Defendant TYCO FIRE PRODUCTS L.P., individually and successor in interest to THE ANSUL COMPANY is a Delaware corporation having a principal place of business at

One Stanton Street, Marinette, Wisconsin 54143 and headquarters at 1400 Pennbrook Parkway, Lansdale, PA 19446. Tyco manufactured and manufactures the Ansul brand of products, including Ansul brand AFFF.

26. Upon information and belief, Defendant Tyco is the successor in interest to the corporation formerly known as the Ansul Company (“Ansul”). Hereinafter, Ansul and/or Tyco as the successor in interest to Ansul will be referred to collectively as “Tyco/Ansul.”

27. At all times relevant, Tyco/Ansul designed, tested, manufactured and sold AFFF, used for research, development and training purposes in the Ansul Fire Technology Center (“AFTC”).

28. In 2011 Tyco/Ansul acquired Chemguard Inc.

29. Defendant Chemguard Inc. is a Texas corporation having its principal place of business at One Stanton Street, Marinette, Wisconsin 54143.

30. At all times relevant to the present litigation, Chemguard designed, manufactured and sold AFFF, used for research, development and training purposes in the AFTC.

31. Defendant ChemDesign, Inc. is a Texas corporation having its principal place of business at 2 Stanton Street, Marinette, Wisconsin 54143.

32. At all times relevant to the present litigation, ChemDesign designed, manufactured and sold PFC’s that were used in the AFFF, that was used for research, development and training purposes in the AFTC.

33. Defendant The 3M Company f/k/a Minnesota Mining and Manufacturing Co. (“3M”) is a corporation organized and existing under the laws of the State of Delaware, with its principal place of business located at 3M Center, St. Paul, Minnesota 55144-1000.

34. From the early 1960's through at least 2002, 3M designed, manufactured, marketed, distributed, and sold AFFF containing PFOS.

35. Upon information and belief, Defendants are responsible, negligently, intentionally and/or in some actionable manner, for the events and happenings referred to herein, and caused and continue to cause injuries and damages legally thereby to Plaintiff, as alleged, either through Defendants' own conduct or through the conduct of its agents, servants or employees, or due to the ownership, maintenance or control of the instrumentality causing them injury, or in some other actionable manner.

FACTUAL ALLEGATIONS RELEVANT TO ALL CAUSES OF ACTION

A. PFAS and Their Risk to Public Health

36. PFAS are chemical compounds containing fluorine and carbon. These substances have been used for decades in the manufacture of, among other things, household and commercial products that resist heat, stains, oil, and water. These substances are not naturally occurring and must be manufactured.

37. The two most widely studied types of these substances are PFOA and PFOS.

38. PFOA and PFOS have unique properties that cause them to be: (i) mobile and persistent, meaning that they readily spread into the environment where they break down very slowly; (ii) bioaccumulative and biomagnifying, meaning that they tend to accumulate in organisms and up the food chain; and (iii) toxic, meaning that they pose serious health risks to humans and animals.

39. PFOA and PFOS easily dissolve in water, and thus they are mobile and easily spread in the environment. PFOA and PFOS also readily contaminate soils and leach from the soil into groundwater, where they can travel significant distances.

40. PFOA and PFOS are characterized by the presence of multiple carbon-fluorine bonds, which are exceptionally strong and stable. As a result, PFOA and PFOS are thermally, chemically, and biologically stable. They resist degradation due to light, water, and biological processes.

41. Bioaccumulation occurs when an organism absorbs a substance at a rate faster than the rate at which the substance is lost by metabolism and excretion. Biomagnification occurs when the concentration of a substance in the tissues of organisms increases as the substance travels up the food chain.

42. PFOA and PFOS bioaccumulate/biomagnify in numerous ways. First, they are relatively stable once ingested, so that they bioaccumulate in individual organisms for significant periods of time. Because of this stability, any newly ingested PFOA and PFOS will be added to any PFOA and PFOS already present. In humans, PFOA and PFOS remain in the body for years.

43. PFOA and PFOS biomagnify up the food chain. This occurs, for example, when humans eat fish that have ingested PFOA and/or PFOS.

44. The chemical structure of PFOA and PFOS makes them resistant to breakdown or environmental degradation. As a result, they are persistent when released into the environment.

45. Exposure to PFAS is toxic and poses serious health risks to humans and animals.

46. PFAS are readily absorbed after consumption or inhalation and accumulate primarily in the bloodstream, kidney, and liver.

B. Defendant's Manufacture and Sale of AFFF Containing PFOS

47. Aqueous Film-foaming Foam ("AFFF") formulations are chemical mixtures used to extinguish hydrocarbon fuel-based fires.

48. AFFF containing fluorinated surfactants have a better fire-fighting capability than plain water due to their surface-tension lowering properties—essentially smothering the fire and starving it of its oxygen.

49. AFFF is a Class-B firefighting foam. It is mixed with water and used to extinguish fires that are difficult to fight, particularly those that involve petroleum or other flammable liquids.

50. AFFF was introduced commercially in the mid-1960s and rapidly became the primary firefighting foam in the U.S. and in many parts of the world.

51. AFFF is synthetically formed by combining fluorine free hydrocarbon foaming agents with surfactants. When mixed with water, the resulting solution produces an aqueous film that spreads across the surface of hydrocarbon fuel.

52. In the foam industry, concentrates are typically referred to as “3%” or “6%” concentrate, depending on the mixture rate with water. AFFF concentrates contain about 60-90% water and have a fluorine content of about 0.3-1.8%.

53. PFCs used in 3M’s AFFF were produced by a unique and patented process known as electrochemical fluorination (“ECF”). The ECF process resulted in a product that contains PFOS.

54. 3M was the only company to manufacture PFOS-containing AFFF.

55. In 1947, 3M began producing PFOA via ECF.

56. In 1951, 3M began selling its PFOA to other chemical companies.

57. In an attempt to limit liability, 3M opted to stop producing PFOS in 2002 because it was aware of the looming chemical exposure and health effects on the American public.

C. Defendant's Knowledge of the Threats to Public Health and the Environment Posed by PFAS

58. On information and belief, by at least the 1970s, 3M knew or should have known that PFOA and PFOS are mobile and persistent, bioaccumulative and biomagnifying, and toxic.

59. On information and belief, 3M concealed from the public and government agencies its knowledge of the threats to public health and the environment posed by PFOA and PFOS.

60. Defendant understood how stable the fluorinated surfactants used in AFFF are when released into the environment from their first sale to a customer, yet they failed to warn their customers or provide reasonable instruction on how to manage wastes generated from their products.

i. 1940s and 1950s: Early Warnings About the Persistence of AFFF

61. In 1947, 3M started its fluorochemical program, and within four years, it began selling its PFOA to DuPont. The persistence and contaminating nature of the fluorosurfactants contained in AFFF products were understood prior to their commercial application at 3M's Cottage Grove facility in Minnesota.

62. The inventor of 3M's ECF process was J.H. Simons. Simons' 1948 patent for the ECF process reported that PFCs are "non-corrosive, and of little chemical reactivity," and "do not react with any of the metals at ordinary temperatures and react only with the more chemically reactive metals such as sodium, at elevated temperatures."⁴

63. Simons further reported that fluorosurfactants produced by the ECF process do not react with other compounds or reagents due to the blanket of fluorine atoms surrounding the

⁴ Simons, J. H., Fluorination of Organic Compounds, U.S. Patent No. 2,447,717. August 24, 1948, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1005.pdf>.

carbon skeleton of the molecule. 3M understood that the stability of the carbon-to-fluorine bonds prevented its fluorosurfactants from undergoing further chemical reactions or degrading under natural processes in the environment.⁵

64. The thermal stability of 3M's fluorosurfactants was also understood prior to commercial production. Simons' patent application further discloses that the fluorosurfactants produced by the ECF process were thermally stable at temperatures up to 750° C (1382° F). Additional research by 3M expanded the understanding of the thermal stability of perfluorocarbon compounds.⁶

65. Nowhere in any Material Safety Data Sheet for 3M's AFFF is information on the thermal stability of those products disclosed. Failure to disclose knowledge of the stability of the PFCs and fluorosurfactants used in AFFF products to customers is a failure to warn just how indestructible the AFFF's ingredients are when released to unprotected water sources and even treatment plants.

ii. 1960s: AFFF's Environmental Hazards Come Into Focus

66. By at least the end of the 1960s, additional research and testing performed by 3M indicated that fluorosurfactants, including at least PFOS and PFOA, because of their unique chemical structure, were resistant to environmental degradation and would persist in the environment essentially unaltered if allowed to enter the environment.

67. One 3M employee wrote in 1964: "This chemical stability also extends itself to all types of biological processes; there are no known biological organisms that are able to attack

⁵ Simons, J. H., 1950. Fluorocarbons and Their Production. Fluorine Chemistry, 1(12): 401-422, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX3008.pdf>.

⁶ Bryce, T. J., 1950. Fluorocarbons - Their Properties and Wartime Development. Fluorine Chemistry, 1(13): 423-462.

the carbon-fluorine bond in a fluorocarbon.”⁷ Thus, 3M knew by the mid-1960s that its surfactants were immune to chemical and biological degradation in soils and groundwater.

68. 3M also knew by 1964 that when dissolved, fluorocarbon carboxylic acids and fluorocarbon sulfonic acids dissociated to form highly stable perfluorocarboxylate and perfluorosulfonate ions. Later studies by 3M on the adsorption and mobility of FC-95 (the potassium salt of PFOS) and FC-143 (the ammonium salt of PFOA) in soils indicated very high solubility and very high mobility in soils for both compounds.⁸

iii. 1970s: Internal Studies Provide Evidence of Environmental and Health Risks

69. By 1950, 3M knew that the fluorosurfactants used in its AFFF product(s) would not degrade when released to the environment but would remain intact and persist. Two decades later—and after the establishment of a robust market of AFFFs using fluorosurfactants—3M finally got around to looking at the environmental risks that fluorosurfactants posed.

70. An internal memo from 3M in 1971 states that “the thesis that there is ‘no natural sink’ for fluorocarbons obviously demands some attention.”⁹ Hence, 3M understood at the very least that the fluorosurfactant used in its AFFF products would, in essence, never degrade once it was released into the environment.

71. By the mid-1970s, 3M had an intimate understanding of the persistent nature of PFCs. A 1976 study, for example, observed no biodegradation of FC-95, the potassium salt of

⁷ Bryce, H.G., Industrial and Utilitarian Aspects of Fluorine Chemistry (1964), *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX3022.pdf>.

⁸ Technical Report Summary re : Adsorption of FC 95 and FC143 on Soil, Feb. 27, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1158.pdf>.

⁹ Memorandum from H.G. Bryce to R.M. Adams re : Ecological Aspects of Fluorocarbons, Sept. 13, 1971, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1088.pdf>.

PFOS; a result 3M characterized as “unsurprising” in light of the fact that “[b]iodegradation of FC 95 is improbable because it is completely fluorinated.”¹⁰

72. A 1978 3M biodegradation study likewise reported that an “extensive study strongly suggest[ed]” one of its PFCs is “likely to persist in the environment for extended period unaltered by metabolic attack.”¹¹ A year later, a 3M study reported that one of its fluorosurfactants “was found to be completely resistant to biological test conditions,” and that it appeared waterways were the fluorosurfactant’s “environmental sink.”¹²

73. In 1979, 3M also completed a comprehensive biodegradation and toxicity study covering investigations between 1975 and 1978.¹³ More than a decade after 3M began selling AFFF containing fluorosurfactants it wrote: “there has been a general lack of knowledge relative to the environmental impact of these chemicals.” The report ominously asked, “If these materials are not biodegradable, what is their fate in the environment?”

74. During the 1970s, 3M also learned that the fluorosurfactants used in AFFF accumulated in the human body and were “even more toxic” than previously believed.

75. In 1975, 3M learns that PFAS was present in the blood of the general population.¹⁴ Since PFOA and PFOS are not naturally occurring, this finding should have alerted 3M to the possibility that their products were a source of this PFOS. The finding also should

¹⁰ Technical Report Summary, August 12, 1976 [3MA01252037].

¹¹ Technical Report Summary re : Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons - II, Jan. 1, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1153.pdf>.

¹² Technical Report Summary re : Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons - III, July 19, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1179.pdf>.

¹³ Technical Report Summary, Final Comprehensive Report on FM 3422, Feb. 2, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2563.pdf>.

¹⁴ Memorandum from G.H. Crawford to L.C. Krogh et al. re: Fluorocarbons in Human Blood Plasma, Aug. 20, 1975, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1118.pdf>.

have alerted 3M to the possibility that PFOS might be mobile, persistent, bioaccumulative, and biomagnifying, as those characteristics could explain how PFOS from 3M's products ended up in human blood.

76. In 1976, 3M found PFAS in the blood of its workers at levels “up to 1000 times ‘normal’ amounts of organically bound fluorine in their blood.”¹⁵ This finding should have alerted 3M to the same issues raised by the prior year’s findings.

77. Studies by 3M in 1978 showed that PFOA reduced the survival rate of fathead minnow fish eggs,¹⁶ that PFOS was toxic to monkeys,¹⁷ and that PFOS and PFOA were toxic to rats.¹⁸ In the study involving monkeys and PFOS, all of the monkeys died within days of ingesting food contaminated with PFOS.

78. In 1979, 3M and DuPont discussed 3M’s discovery of PFOA in the blood of its workers and came to the same conclusion that there was “no reason” to notify the EPA of the finding.¹⁹

¹⁵ 3M Chronology – Fluorochemicals in Blood, Aug. 26, 1977, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1144.pdf>.

¹⁶ The Effects of Continuous Aqueous Exposure to 78.03 on Hatchability of Eggs and Growth and Survival of Fry of Fathead Minnow, June 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1176.pdf>.

¹⁷ Ninety-Day Subacute Rhesus Monkey Toxicity Study, Dec. 18, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1191.pdf>; Aborted FC95 Monkey Study, Jan. 2, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1193.pdf>.

¹⁸ Acute Oral Toxicity (LD₅₀) Study in Rats (FC-143), May 5, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1170.pdf>; FC-95, FC-143 and FM-3422 – 90 Day Subacute Toxicity Studies Conducted at IRDC – Review of Final Reports and Summary, Mar. 20, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1199.pdf>.

¹⁹ Memorandum from R.A. Prokop to J.D. Lazerte re: Disclosure of Information on Levels of Fluorochemicals in Blood, July 26, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2723.pdf>.

iv. 1980s and 1990s: Evidence of AFFF's Health Risks Continues to Mount

79. By at least the end of the 1980s, additional research and testing performed by 3M indicated that elevated incidence of certain cancers and other adverse health effects, including elevated liver enzymes and birth defects, had been observed among workers exposed to such materials, including at least PFOA and PFOS, but such data was not published, provided to governmental entities as required by law, or otherwise publicly disclosed at the time.

80. In 1983, 3M researchers concluded that concerns about PFAS “give rise to concern for environmental safety,” including “legitimate questions about the persistence, accumulation potential, and ecotoxicity of fluorochemicals in the environment.”²⁰ That same year, 3M completed a study finding that PFOS caused the growth of cancerous tumors in rats.²¹ This finding was later shared with DuPont and led them to consider whether “they may be obliged under their policy to call FC-143 a carcinogen in animals.”²²

81. In 1984, 3M documented a trend of increasing levels of PFOS in the bodies of 3M workers, leading one of the company’s medical officers to warn in an internal memo: “we must view this present trend with serious concern. It is certainly possible that . . . exposure opportunities are providing a potential uptake of fluorochemicals that exceeds excretion capabilities of the body.”²³

²⁰ 3M Environmental Laboratory (EE & PC), Fate of Fluorochemicals - Phase II, May 20, 1983, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1284.pdf>.

²¹ Two Year Oral (Diet) Toxicity/Carcinogenicity Study of Fluorochemical FC-143 in Rats, Volume 1 of 4, Aug. 29, 1987, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1337.pdf>.

²² Memorandum from R.G. Perkins to F.D. Griffith re: Summary of the Review of the FC-143 Two-Year Feeder Study Report to be presented at the January 7, 1988 meeting with DuPont, January 5, 1988, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1343.pdf>.

²³ Memorandum from D.E. Roach to P.F. Riehle re: Organic Fluorine Levels, Aug. 31, 1984, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1313.pdf>.

82. A 1997 material safety data sheet (“MSDS”) for a non-AFFF product made by 3M listed its only ingredients as water, PFOA, and other perfluoroalkyl substances and warned that the product includes “a chemical which can cause cancer.” The MSDS cited “1983 and 1993 studies conducted jointly by 3M and DuPont” as support for this statement. On information and belief, the MSDS for 3M’s AFFF products did not provide similar warnings or information.

v. 3M Hid What They Knew from the Government and the Public.

83. Federal law requires chemical manufacturers and distributors to immediately notify the EPA if they have information that “reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment.” Toxic Substances Control Act (“TSCA”) § 8(e), 15 U.S.C. § 2607(e).

84. In April 2006, 3M agreed to pay EPA a penalty of more than \$1.5 million after being cited for 244 violations of the TSCA, which included violations for failing to disclose studies regarding PFOS, PFOA, and other PFCs dating back decades.

85. On information and belief, 3M knew or should have known that AFFF containing PFOS would very likely injure and/or threaten public health and the environment, even when used as intended or directed.

86. 3M failed to warn of these risks to the environment and public health, including the impact of its AFFF on the quality of unprotected water sources.

87. 3M was sophisticated and knowledgeable in the art and science of designing, formulating, and manufacturing AFFF. 3M understood far more about the properties of its AFFF—including the potential hazards they posed to human health and the environment—than any of their customers. Still, 3M declined to use its sophistication and knowledge to design safer products.

D. The Impact of PFOS on the Environment and Human Health Is Finally Revealed

88. As described above, 3M failed to comply with its obligations to notify EPA about the “substantial risk of injury to health or the environment” posed by its AFFF Products. *See* TSCA § 8(e).

89. Despite decades of research, 3M first shared its concerns with EPA in the late 1990s. In a May 1998 report submitted to EPA, “3M chose to report simply that PFOS had been found in the blood of animals, which is true but omits the most significant information,” according to a former 3M employee.²⁴

90. On information and belief, 3M began in 2000 to phase out its production of products that contained PFOS and PFOA in response to pressure from the EPA.

91. Once the truth about PFOS and PFOA was revealed, researchers began to study the environmental and health effects associated with them, including a “C8 Science Panel” formed out of a class action settlement arising from contamination from DuPont’s Washington Works located in Wood County, West Virginia.

92. The C8 panel consisted of three epidemiologists specifically tasked with determining whether there was a probable link between PFOA exposure and human diseases. In 2012, the panel found probable links between PFOA and kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, pregnancy-induced hypertension (including preeclampsia), and hypercholesterolemia.

93. Human health effects associated with PFOS exposure include immune system effects, changes in liver enzymes and thyroid hormones, low birth weight, high uric acid, and

²⁴ Letter from R. Purdy, Mar. 28, 1999, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1001.pdf>.

high cholesterol. In laboratory testing on animals, PFOA and PFOS have caused the growth of tumors, changed hormone levels, and affected the function of the liver, thyroid, pancreas, and immune system.

94. The injuries caused by PFAS can arise months or years after exposure.

95. At all relevant times, 3M, through its acts and/or omissions, controlled, minimized, trivialized, manipulated, and/or otherwise influenced the information that was published in peer-review journals, released by any governmental entity, and/or otherwise made available to the public relating to PFAS in human blood and any alleged adverse impacts and/or risks associated therewith, effectively preventing the public from discovering the existence and extent of any injuries/harm as alleged herein.

96. On May 2, 2012, the EPA published its Third Unregulated Contaminant Monitoring Rule (“UCMR3”), requiring public water systems nationwide to monitor for thirty contaminants of concern between 2013 and 2015, including PFOS and PFOA.²⁵

97. In the May 2015 “Madrid Statement on Poly- and Perfluoroalkyl Substances (PFAS’s),” scientists and other professionals from a variety of disciplines, concerned about the production and release into the environment of PFOA, called for greater regulation, restrictions, limits on the manufacture and handling of any PFOA containing product, and to develop safe non-fluorinated alternatives to these products to avoid long-term harm to human health and the environment.²⁶

²⁵ *Revisions to the Unregulated Contaminant Monitoring Regulation (UCMR 3) for Public Water Systems*, 77 Fed. Reg. 26072 (May 2, 2012).

²⁶ Blum A, Balan SA, Scheringer M, Trier X, Goldenman G, Cousins IT, Diamond M, Fletcher T, Higgins C, Lindeman AE, Peaslee G, de Voogt P, Wang Z, Weber R. 2015. The Madrid statement on poly- and perfluoroalkyl substances (PFASs). *Environ Health Perspect* 123:A107–A111; <http://dx.doi.org/10.1289/ehp.1509934>.

98. On May 25, 2016, the EPA released a lifetime health advisory (HAs) and health effects support documents for PFOS and PFOA.²⁷ *See* Fed. Register, Vol. 81, No. 101, May 25, 2016. The EPA developed the HAs to assist governmental officials in protecting public health when PFOS and PFOA are present in drinking water. The EPA HAs identified the concentration of PFOS and PFOA in drinking water at or below which adverse health effects are not anticipated to occur over a lifetime of exposure at 0.07 ppb or 70 ppt. The HAs were based on peer-reviewed studies of the effects of PFOS and PFOA on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations exposed to PFOS. These studies indicate that exposure to PFOS and PFOA over these levels may result in adverse health effects, including:

- a. Developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations);
- b. Cancer (testicular and kidney);
- c. Liver effects (tissue damage);
- d. Immune effects (e.g., antibody production and immunity);
- e. Thyroid disease and other effects (e.g., cholesterol changes).

99. In addition, PFOS and PFOA are hazardous materials because they pose a “present or potential threat to human health.”²⁸

100. In 2016, the National Toxicology Program of the United States Department of Health and Human Services (“NTP”) and the International Agency for Research on Cancer

²⁷ *See* Fed. Register, Vol. 81, No. 101, May 25, 2016, Lifetime Health Advisories and Health Effects Support Documents for Perfluorooctanoic Acid and Perfluorooctane Sulfonate.

²⁸ *Id.*; *see also* *National Ass’n for Surface Finishing v. EPA*, 795 F.3d 1, 3, 6 (D.C. Cir. 2015) (referring to PFOS as a “toxic compound” and a “hazardous chemical.”).

(“IARC”) both released extensive analyses of the expanding body of research regarding the adverse effects of PFCs. The NTP concluded that both PFOA and PFOS are “presumed to be an immune hazard to humans” based on a “consistent pattern of findings” of adverse immune effects in human (epidemiology) studies and “high confidence” that PFOA and PFOS exposure was associated with suppression of immune responses in animal (toxicology) studies.²⁹

101. IARC similarly concluded that there is “evidence” of “the carcinogenicity of . . . PFOA” in humans and in experimental animals, meaning that “[a] positive association has been observed between exposure to the agent and cancer for which a causal interpretation is . . . credible.”³⁰

102. California has listed PFOA and PFOS to its Proposition 65 list as a chemical known to cause reproductive toxicity under the Safe Drinking Water and Toxic Enforcement Act of 1986.³¹

103. The United States Senate and House of Representatives passed the National Defense Authorization Act in November 2017, which included \$42 Million to remediate PFC contamination from military bases, as well as devoting \$7 Million toward the Investing in Testing Act, which authorizes the Center for Disease Control and Prevention (“CDC”) to

²⁹ See U.S. Dep’t of Health and Human Services, Nat’l Toxicology Program, *NTP Monograph: Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid or Perfluorooctane Sulfonate* (Sept. 2016), at 1, 17, 19, available at https://ntp.niehs.nih.gov/ntp/ohat/pfoa_pfos/pfoa_pfosmonograph_508.pdf

³⁰ See Int’l Agency for Research on Cancer, IARC Monographs: *Some Chemicals Used as Solvents and in Polymer Manufacture* (Dec. 2016), at 27, 97, available at <http://monographs.iarc.fr/ENG/Monographs/vol110/mono110.pdf>.

³¹ California Office of Environmental Health Hazard Assessment, *Chemicals Listed Effective Nov. 10, 2017 as Known to the State of California to Cause Reproductive Toxicity: Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS)*, Nov. 9, 2017, available at <https://oehha.ca.gov/proposition-65/cmr/chemicals-listed-effective-november-10-2017-known-state-california-cause>.

conduct a study into the long-term health effects of PFOA and PFOS exposure.³² The legislation also required that the Department of Defense submit a report on the status of developing a new military specification for AFFF that did not contain PFOS or PFOA.³³

104. In February 2018, the Wisconsin Department of Natural Resources (“WDNR”) stated that PFAS compounds meet the definition of hazardous substance and/or environment pollution under Wis. Stat. § 292.01. Therefore, persons responsible for the discharge of PFAS to waters of the State of Wisconsin were required to immediately notify the state, conduct a site investigation, determine the appropriate clean-up standards and perform the necessary response actions. Wis. Admin. Code chaps. NR 700-754. The non-industrial direct contact soil residual contaminant levels (RCLs) for both PFOA and PFOS is 1.26 mg/kg. The industrial direct contact RCL for both PFOA and PFOS is 16.4 mg/kg.³⁴

105. Wisconsin currently follows the USEPA HAL of 70 ppt for combined PFOA and PFOS levels.

106. In June 2018, the Agency for Toxic Substances and Disease Registry (“ATSDR”) and EPA released a draft toxicological profile for PFOS and PFOA and recommended the drinking water advisory levels be lowered to 11 ppt for PFOA and 7 ppt for PFOS.³⁵

³² National Defense Authorization Act for Fiscal Year 2018, H.R. 2810, 115th Congress (2017), available at <https://www.congress.gov/115/plaws/publ91/PLAW-115publ91.pdf>.

³³ *Id.*; see also U.S. Department of Defense, *Alternatives to Aqueous Film Forming Foam Report to Congress*, June 2018, available at <https://www.denix.osd.mil/derp/home/documents/alternatives-to-aqueous-film-forming-foam-report-to-congress/>.

³⁴ Department of Natural Resources, *Wisconsin DNR’s Remediation and Redevelopment Program Has Authority to Regulate Emerging Contaminants- including PFAS Compounds* (last visited September 25, 2018), <https://dnr.wi.gov/topic/brownfields/documents/bsg/1802PFCarticle.pdf>

³⁵ ATSDR, *Toxicological Profile for Perfluoroalkyls: Draft for Public Comment* (June 2018), available at <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>.

107. On February 20, 2020, the EPA announced a proposed decision to regulate PFOA and PFOS under the Safe Drinking Water Act, which the agency characterized as a “key milestone” in its efforts to “help communities address per- and polyfluoroalkyl substances (PFAS) nationwide.”³⁶ Following a public comment period on its proposed decision, the EPA will decide whether to move forward with the process of establishing a national primary drinking water regulation for PFOA and PFOS.

E. Ownership and Use of the AFTC

108. The AFTC is an active fire suppressant training, testing, research, and development facility located at 1 Stanton Street in Marinette, Wisconsin.

109. The AFTC encompasses 380 acres including a section known as the Outdoor Testing Area, consisting of 9 acres used in connection with the Fire Training School, Research and Development and Quality Testing activities. The remaining area of the site is used for equipment manufacturing, warehousing, offices, classrooms, and parking. The Outdoor Testing Area was constructed in 1961. Since then it has been used to perform testing, demonstrations and training on a range of fire suppressants

110. The AFTC has various buildings for fire testing, research and development and quality testing activities.

111. The AFTC hosts fire schools and foam schools during the summer months to train employees and customers on fire suppression techniques.

³⁶ Press Release, *EPA Announces Proposed Decision to Regulate PFOA and PFOS in Drinking Water*, Feb. 20, 2020, available at <https://www.epa.gov/newsreleases/epa-announces-proposed-decision-regulate-pfoa-and-pfos-drinking-water>.

112. The Hydraulics Laboratory is used to conduct performance testing of foam systems. It has an outdoor foam monitor pad which is sloped in design so that drainage of water/foam mixture is directed back into a collection system inside the building.

113. The two Fire Test Houses have been used for indoor fire testing, including foam and foam sprinkler testing.

114. The Cold Storage has been used for foam testing activities, test enclosure extinguishment testing and nozzle testing.

115. The Center of Excellence contains a research laboratory and an instrument laboratory, which have been used for foam products and PFCs.

116. The Warehouse is used to store foam products and foam PFCs.

117. The area near the AFTC is drained by ditches, which are hydraulically connected with the groundwater in Marinette, Wisconsin.³⁷

118. Water-levels measured in the AFTC monitoring well network, which is focused in the central and northeast portion of the facility, predict flow toward the east or northeast.

119. The AFTC facility is located at 1 Stanton Street, Marinette.

120. ChemDesign, a chemical manufacturing facility, leases various buildings on the Stanton Street premises and manufactures the PFCs used by Tyco in its foam concentrate.

121. Tyco/Ansul rents a warehouse at 150 Pine Street in the City of Peshtigo, where it performs indoor foam proportioning of high expansion foam and foam products for research and development purposes.

122. Tyco/Ansul rents a warehouse at 3100 Woleske Rd., Marinette that is used to store containers of foam surfactants and foam concentrate.

³⁷ Tyco FireProducts LP, Revised Site Investigation Work Plan, April 2018, <https://dnr.wi.gov/botw/GetActivityDetail.do?siteId=1552500&adn=0238580694>

123. Tyco/Ansul manufactures AFFF. This foam consists of various materials that are blended together to make a foam agent or foam concentrate. One of the materials in the blend is a surfactant, which contains PFC's. Foam concentrates contained PFC's consisting of compounds with 8 carbon chain lengths (C8).³⁸

124. AFFF manufactured by Tyco/Ansul has been used at the Site as part of research and development, quality testing and firefighting training activities. PFCs such as PFOA and PFOS have been present in various foam products manufactured by Tyco/Ansul.³⁹

125. Tyco/Ansul first began testing foam concentrate at the AFTC in or around 1962. This foam concentrate was manufactured by 3M and was tested in combination with a dry chemical. The AFTC became a distributor of the 3M made foams and continued testing into the 1970's.

126. In 1973 Tyco/Ansul partnered with a chemical manufacturer to develop a telomer-based C8 foam concentrate. This product was introduced between 1973-1975 and then Tyco/Ansul terminated its distribution of the 3M foams.

127. In 1988 Tyco/Ansul began providing third party laboratory scale testing services of foam agents for end users' and distributors' annual performance evaluation requirements.

128. The AFTC began initial site investigation activities in 1993 to delineate the extent of soil and groundwater contamination resulting from a leaking underground storage tank. Since

³⁸ Tyco's Response Letter to WDNR Additional Information Request, submitted March 12, 2018 <https://dnr.wi.gov/botw/GetActivityDetail.do?siteId=1552500&adn=0238580694>

³⁹ Tyco FireProducts LP Long-term portable well sampling plan, <https://dnr.wi.gov/botw/GetActivityDetail.do?siteId=1552500&adn=0238580694>

then, several investigation phases including a groundwater monitoring program have been conducted.⁴⁰

129. Petroleum and petroleum-related products as fire accelerants were used as part of the firefighting training and product testing activities at the AFTC. Initial investigation activities were implemented upon removal of a 564-gallon gasoline UST in 1992.⁴¹

130. In response to the Groundwater Sampling Work Plan, the WDNR approved a list of monitoring wells.

131. Testing of some C6 PFC's began at AFTC between 1990s-2000. From 2006-2013, C6 and C8 foams were tested at the AFTC. Since 2014, testing has primarily focused on C6 foams.

132. Tyco performed testing at the AFTC property in 2013 and 2014, and the results indicated that PFOS and PFOA were present in the soil and groundwater at the Site and in off-Site potable wells.⁴²

133. The AFTC is conducting corrective actions pursuant to a 2009 Administrative Order on Consent with the US EPA. The Order requires Tyco/Ansul to implement institutional controls, soil remediation, sediment removal from the Menominee River, as well as on-site groundwater management. Tyco installed a barrier made of sheet pile and a slurry wall around the entire facility border to contain arsenic-polluted groundwater on-site. Tyco is also replacing or removing parts of their storm water sewer and industrial sewer systems to prevent groundwater penetration into the outfall system.

⁴⁰ Letter submitted July 5, 2016 and 2016 Investigation Report
<https://dnr.wi.gov/botw/GetActivityDetail.do?siteId=1552500&adn=0338001345>.

⁴¹ *Id.*

⁴² <http://marinette.tycofpp.com/faqs.php>.

134. In 2016, under investigation to delineate the extent of volatile organic compound (VOC) constituents, a subset of samples were analyzed for PFAS. The PFAS analysis of 38 groundwater samples from vertical aquifer profiling (VAP) boring locations at the Site indicated the presence of PFAS compounds. PFAS analysis of 16 shallow soil samples in the Outdoor Testing Area also indicated the presence of these compounds. Groundwater and soil data from these investigation activities were submitted to Wisconsin Department of Natural Resources (“WDNR”) in November 2016.⁴³

135. Investigation of PFAS in off-Site groundwater began in 2017. This sampling identified PFAS in groundwater extending southeast, east and northeast from the Site. The groundwater data collected showed that PFAS concentrations detected in off-Site groundwater is due to PFAS transport through groundwater and historical stormwater runoff to the on-Site and off-Site ditches. Investigation of off-Site groundwater has included the sampling of approximately 140 private wells located predominantly to the southeast of the Site, including Plaintiff’s private well.

136. In November 2017, Tyco launched an investigation of PFAS, conducted under the oversight of the WDNR and the Wisconsin Department of Health Services (“WDHS”).⁴⁴

137. A total of 24 subsurface borings were drilled, with 98 groundwater samples collected and the combined PFOA and PFOS concentrations detected ranged from non-detect to 1,653 ppt.

⁴³ Tyco FireProducts LP, Site Investigation Work Plan, March 2018, <https://dnr.wi.gov/botw/GetActivityDetail.do?siteId=1552500&adn=0238580694>.

⁴⁴ Tyco FireProducts LP, Site Investigation Work Plan, <https://dnr.wi.gov/botw/GetActivityDetail.do?siteId=1552500&adn=0238580694>

138. Four samples of standing water within ditches on the AFTC were collected and the combined PFOA and PFOS concentrations detected ranged from 417 to 4,620 ppt.

139. Testing also began on select private wells within the investigation area. Based on the first sets of groundwater investigation results, the initial sampling area (Phase 1) was defined. In Phase 1, Zone A, 8 well samples PFOA and PFOS concentrations detected more than HAL 70 ppt.

140. On December 17, 2017 a public meeting in the Town of Peshtigo was held with the WDNR and WDHS to inform the residents of the investigation area about the work underway, and the plan to study private drinking water wells. Bottled water was offered to all users of drinking water wells within the private well sampling area.

141. The study area was expanded (Phase II). Since December 2017, 137 drinking water wells have been sampled. The combined PFOA and PFOS results were as follows: detections greater than the HAL (70 ppt): 11 wells (detections ranged from 73 to 1,900 ppt) and detections less than the HAL: 29 wells (detections ranged from 3.9 to 49 ppt). Point of Entry Treatment (POET) systems were offered to owners/users of drinking water wells where PFOA and PFOS concentrations were greater than the HAL.

142. On January 23, 2018 Tyco held a second public meeting in the Town of Peshtigo with WDNR and WDHS to present the sampling data to residents in the study area, answer questions, and discuss plans for additional studies in the area.

143. At the January 23, 2018 meeting, Tyco stated that sampling results found detections greater than the HAL in 8 sample wells, with detections ranging from 84 to 690 ppt.⁴⁵

⁴⁵ Community Meeting Slides, January 23, 2018

144. In March 2018, Tyco submitted a Site Investigation Work Plan to the DNR which provided plans for additional investigation of groundwater, soil, ditches and surface water. Tyco also submitted a Long-Term Potable Well Sampling Plan with a schedule for additional sampling of drinking water wells. The WDNR provided comments on those plans, and updated documents were prepared in response to those comments. The WDNR approved the updated documents.

145. In March 2018, Tyco contacted all the drinking water well owners/users within the sampling area to collect additional spring 2018 samples.

146. On April 30 and May 1, 2018, Tyco collected groundwater samples for PFAS analyses from 7 existing monitoring wells. One sample was collected of combined groundwater influent to the existing groundwater treatment system. PFOA concentrations detected ranged from 130 to 9,100 ng/L. PFOS concentrations detected ranged from 25 to 650ng/L.⁴⁶

147. In June 2018 Tyco conducted testing of groundwater for PFAS compounds at their Stanton Street facility in Marinette. Results indicated the presence of PFAS in groundwater samples collected at the Stanton Street facility.

148. Tyco said it found chemicals in groundwater a few miles away in monitoring wells at its riverside plant. The wells were installed as part of a separate toxic cleanup of arsenic by the company.⁴⁷

149. Elevated levels of the chemicals have shown up in Marinette's wastewater treatment system during tests in November and May, according to the City of Marinette and WDNR records. After treating the waste, effluent containing PFCs are released into the river.

⁴⁶ Stanton Street Grounwater Sample Results, June 8, 2018

⁴⁷ Bergquist, Lee. *New evidence of groundwater pollution turning up near Lake Michigan at Tyco plant in Marinette.* Milwaukee Journal Sentinel. June 18, 2018. <https://www.jsonline.com/story/news/local/wisconsin/2018/06/18/new-evidence-groundwater-pollution-turning-up-near-tyco-plant/703136002/>

150. WDNR directed the city to test sludge samples. The leftover sludge historically has been spread on farm fields. A city official told the Milwaukee Journal Sentinel that this practice has been taking place for 30 years.

151. Tyco suspended all outdoor activities using foam at FTC during the winter months of 2017-2018.

152. In its July 17, 2018 online update on contaminants migrating from its operations in northeastern Wisconsin, Tyco said PFAS has been detected in two ditches that run through and near the AFTC and lead to Green Bay.

153. One of those ditches flows into Green Bay at Runnoe Park near the University of Wisconsin-Marinette; the other flows to Little River, south of the city.⁴⁸ Some water samples were taken near Lake Michigan, according to Steve Ales, the DNR's field operations manager for remediation and redevelopment.

154. On July 19, 2018 the WDHS recommended people in affected areas within the Marinette City Limits and the Town of Peshtigo to use alternate water that does not contain PFAS above the U.S. EPA Health Advisory Level of 70 parts per trillion (ppt) for gardens.

155. Trace amounts of the chemicals have also been detected in Marinette's municipal drinking water, according to city and DNR records. Defendants' chemicals are flowing into Lake Michigan and contaminating the water and aquatic life, including fish.

156. Tyco/Ansul has told the DNR that some samples contain concentrations of 2,000 to 3,000 parts per trillion. Tyco reported that four samples of standing water in ditches at the

⁴⁸ Bergquist, Lee. *In new sign of troubles, manufacturer seeks to rid chemicals in ditches that flow into Green Bay*. Milwaukee Journal Sentinel. July 19, 2018. <https://www.jsonline.com/story/news/2018/07/19/tyco-unit-johnson-controls-wants-extract-pollutants/797837002/>

company's fire training facility had concentrations of PFOA or PFOS ranging between 417 and 4,620 parts per trillion. Tyco has also said it discovered the compounds at a second location — in well samples at its manufacturing plant along the Menominee River, a tributary of Green Bay.

F. PFAS and Their Risk to Public Health

157. PFAS are chemical compounds containing fluorine and carbon. These substances have been used for decades in the manufacture of, among other things, household and commercial products that resist heat, stains, oil, and water. These substances are not naturally occurring and must be manufactured.

158. The two most widely studied types of these substances are PFOA and PFOS.

159. PFOA and PFOS have unique properties that cause them to be: (i) mobile and persistent, meaning that they readily spread into the environment where they break down very slowly; (ii) bioaccumulative and biomagnifying, meaning that they tend to accumulate in organisms and up the food chain; and (iii) toxic, meaning that they pose serious health risks to humans and animals.

160. PFOA and PFOS easily dissolve in water, and thus they are mobile and easily spread in the environment. PFOA and PFOS also readily contaminate soils and leach from the soil into groundwater, where they can travel significant distances.

161. PFOA and PFOS are characterized by the presence of multiple carbon-fluorine bonds, which are exceptionally strong and stable. As a result, PFOA and PFOS are thermally, chemically, and biologically stable. They resist degradation due to light, water, and biological processes.

162. Bioaccumulation occurs when an organism absorbs a substance at a rate faster than the rate at which the substance is lost by metabolism and excretion. Biomagnification

occurs when the concentration of a substance in the tissues of organisms increases as the substance travels up the food chain.

163. PFOA and PFOS bioaccumulate/biomagnify in numerous ways. First, they are relatively stable once ingested, so that they bioaccumulate in individual organisms for significant periods of time. Because of this stability, any newly ingested PFOA and PFOS will be added to any PFOA and PFOS already present. In humans, PFOA and PFOS remain in the body for years.

164. PFOA and PFOS biomagnify up the food chain. This occurs, for example, when humans eat fish that have ingested PFOA and/or PFOS.

165. The chemical structure of PFOA and PFOS makes them resistant to breakdown or environmental degradation. As a result, they are persistent when released into the environment.

166. Exposure to PFAS is toxic and poses serious health risks to humans and animals.

167. PFAS are readily absorbed after consumption or inhalation and accumulate primarily in the bloodstream, kidney, and liver.

G. Defendant's Manufacture and Sale of AFFF Containing PFOS

168. Aqueous Film-foaming Foam ("AFFF") formulations are chemical mixtures used to extinguish hydrocarbon fuel-based fires.

169. AFFF containing fluorinated surfactants have a better fire-fighting capability than plain water due to their surface-tension lowering properties—essentially smothering the fire and starving it of its oxygen.

170. AFFF is a Class-B firefighting foam. It is mixed with water and used to extinguish fires that are difficult to fight, particularly those that involve petroleum or other flammable liquids.

171. AFFF was introduced commercially in the mid-1960s and rapidly became the primary firefighting foam in the U.S. and in many parts of the world.

172. AFFF is synthetically formed by combining fluorine free hydrocarbon foaming agents with surfactants. When mixed with water, the resulting solution produces an aqueous film that spreads across the surface of hydrocarbon fuel.

173. In the foam industry, concentrates are typically referred to as “3%” or “6%” concentrate, depending on the mixture rate with water. AFFF concentrates contain about 60-90% water and have a fluorine content of about 0.3-1.8%.

174. PFCs used in 3M’s AFFF were produced by a unique and patented process known as electrochemical fluorination (“ECF”). The ECF process resulted in a product that contains PFOS.

175. 3M was the only company to manufacture PFOS-containing AFFF.

176. In 1947, 3M began producing PFOA via ECF.

177. In 1951, 3M began selling its PFOA to other chemical companies.

178. In an attempt to limit liability, 3M opted to stop producing PFOS in 2002 because it was aware of the looming chemical exposure and health effects on the American public.

H. Defendant’s Knowledge of the Threats to Public Health and the Environment Posed by PFAS

179. On information and belief, by at least the 1970s, 3M knew or should have known that PFOA and PFOS are mobile and persistent, bioaccumulative and biomagnifying, and toxic.

180. On information and belief, 3M concealed from the public and government agencies its knowledge of the threats to public health and the environment posed by PFOA and PFOS.

181. Defendant understood how stable the fluorinated surfactants used in AFFF are when released into the environment from their first sale to a customer, yet they failed to warn

their customers or provide reasonable instruction on how to manage wastes generated from their products.

vi. 1940s and 1950s: Early Warnings About the Persistence of AFFF

182. In 1947, 3M started its fluorochemical program, and within four years, it began selling its PFOA to DuPont. The persistence and contaminating nature of the fluorosurfactants contained in AFFF products were understood prior to their commercial application at 3M's Cottage Grove facility in Minnesota.

183. The inventor of 3M's ECF process was J.H. Simons. Simons' 1948 patent for the ECF process reported that PFCs are "non-corrosive, and of little chemical reactivity," and "do not react with any of the metals at ordinary temperatures and react only with the more chemically reactive metals such as sodium, at elevated temperatures."⁴⁹

184. Simons further reported that fluorosurfactants produced by the ECF process do not react with other compounds or reagents due to the blanket of fluorine atoms surrounding the carbon skeleton of the molecule. 3M understood that the stability of the carbon-to-fluorine bonds prevented its fluorosurfactants from undergoing further chemical reactions or degrading under natural processes in the environment.⁵⁰

185. The thermal stability of 3M's fluorosurfactants was also understood prior to commercial production. Simons' patent application further discloses that the fluorosurfactants produced by the ECF process were thermally stable at temperatures up to 750° C (1382° F).

⁴⁹ Simons, J. H., Fluorination of Organic Compounds, U.S. Patent No. 2,447,717. August 24, 1948, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1005.pdf>.

⁵⁰ Simons, J. H., 1950. Fluorocarbons and Their Production. *Fluorine Chemistry*, 1(12): 401-422, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX3008.pdf>.

Additional research by 3M expanded the understanding of the thermal stability of perfluorocarbon compounds.⁵¹

186. Nowhere in any Material Safety Data Sheet for 3M's AFFF is information on the thermal stability of those products disclosed. Failure to disclose knowledge of the stability of the PFCs and fluorosurfactants used in AFFF products to customers is a failure to warn just how indestructible the AFFF's ingredients are when released to unprotected water sources and even treatment plants.

vii. 1960s: AFFF's Environmental Hazards Come Into Focus

187. By at least the end of the 1960s, additional research and testing performed by 3M indicated that fluorosurfactants, including at least PFOS and PFOA, because of their unique chemical structure, were resistant to environmental degradation and would persist in the environment essentially unaltered if allowed to enter the environment.

188. One 3M employee wrote in 1964: "This chemical stability also extends itself to all types of biological processes; there are no known biological organisms that are able to attack the carbon-fluorine bond in a fluorocarbon."⁵² Thus, 3M knew by the mid-1960s that its surfactants were immune to chemical and biological degradation in soils and groundwater.

189. 3M also knew by 1964 that when dissolved, fluorocarbon carboxylic acids and fluorocarbon sulfonic acids dissociated to form highly stable perfluorocarboxylate and perfluorosulfonate ions. Later studies by 3M on the adsorption and mobility of FC-95 (the

⁵¹ Bryce, T. J., 1950. Fluorocarbons - Their Properties and Wartime Development. *Fluorine Chemistry*, 1(13): 423-462.

⁵² Bryce, H.G., *Industrial and Utilitarian Aspects of Fluorine Chemistry* (1964), *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX3022.pdf>.

potassium salt of PFOS) and FC-143 (the ammonium salt of PFOA) in soils indicated very high solubility and very high mobility in soils for both compounds.⁵³

viii. 1970s: Internal Studies Provide Evidence of Environmental and Health Risks

190. By 1950, 3M knew that the fluorosurfactants used in its AFFF product(s) would not degrade when released to the environment but would remain intact and persist. Two decades later—and after the establishment of a robust market of AFFFs using fluorosurfactants—3M finally got around to looking at the environmental risks that fluorosurfactants posed.

191. An internal memo from 3M in 1971 states that “the thesis that there is ‘no natural sink’ for fluorocarbons obviously demands some attention.”⁵⁴ Hence, 3M understood at the very least that the fluorosurfactant used in its AFFF products would, in essence, never degrade once it was released into the environment.

192. By the mid-1970s, 3M had an intimate understanding of the persistent nature of PFCs. A 1976 study, for example, observed no biodegradation of FC-95, the potassium salt of PFOS; a result 3M characterized as “unsurprising” in light of the fact that “[b]iodegradation of FC 95 is improbable because it is completely fluorinated.”⁵⁵

193. A 1978 3M biodegradation study likewise reported that an “extensive study strongly suggest[ed]” one of its PFCs is “likely to persist in the environment for extended period unaltered by metabolic attack.”⁵⁶ A year later, a 3M study reported that one of its

⁵³ Technical Report Summary re : Adsorption of FC 95 and FC143 on Soil, Feb. 27, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1158.pdf>.

⁵⁴ Memorandum from H.G. Bryce to R.M. Adams re : Ecological Aspects of Fluorocarbons, Sept. 13, 1971, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1088.pdf>.

⁵⁵ Technical Report Summary, August 12, 1976 [3MA01252037].

⁵⁶ Technical Report Summary re : Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons - II, Jan. 1, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1153.pdf>.

fluorosurfactants “was found to be completely resistant to biological test conditions,” and that it appeared waterways were the fluorosurfactant’s “environmental sink.”⁵⁷

194. In 1979, 3M also completed a comprehensive biodegradation and toxicity study covering investigations between 1975 and 1978.⁵⁸ More than a decade after 3M began selling AFFF containing fluorosurfactants it wrote: “there has been a general lack of knowledge relative to the environmental impact of these chemicals.” The report ominously asked, “If these materials are not biodegradable, what is their fate in the environment?”

195. During the 1970s, 3M also learned that the fluorosurfactants used in AFFF accumulated in the human body and were “even more toxic” than previously believed.

196. In 1975, 3M learns that PFAS was present in the blood of the general population.⁵⁹ Since PFOA and PFOS are not naturally occurring, this finding should have alerted 3M to the possibility that their products were a source of this PFOS. The finding also should have alerted 3M to the possibility that PFOS might be mobile, persistent, bioaccumulative, and biomagnifying, as those characteristics could explain how PFOS from 3M's products ended up in human blood.

⁵⁷ Technical Report Summary re : Fate of Fluorochemicals in the Environment, Biodegradation Studies of Fluorocarbons - III, July 19, 1978, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1179.pdf>.

⁵⁸ Technical Report Summary, Final Comprehensive Report on FM 3422, Feb. 2, 1979, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2563.pdf>.

⁵⁹ Memorandum from G.H. Crawford to L.C. Krogh et al. re: Fluorocarbons in Human Blood Plasma, Aug. 20, 1975, available at <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1118.pdf>.

197. In 1976, 3M found PFAS in the blood of its workers at levels “up to 1000 times ‘normal’ amounts of organically bound fluorine in their blood.”⁶⁰ This finding should have alerted 3M to the same issues raised by the prior year’s findings.

198. Studies by 3M in 1978 showed that PFOA reduced the survival rate of fathead minnow fish eggs,⁶¹ that PFOS was toxic to monkeys,⁶² and that PFOS and PFOA were toxic to rats.⁶³ In the study involving monkeys and PFOS, all of the monkeys died within days of ingesting food contaminated with PFOS.

199. In 1979, 3M and DuPont discussed 3M’s discovery of PFOA in the blood of its workers and came to the same conclusion that there was “no reason” to notify the EPA of the finding.⁶⁴

ix. 1980s and 1990s: Evidence of AFFF’s Health Risks Continues to Mount

200. By at least the end of the 1980s, additional research and testing performed by 3M indicated that elevated incidence of certain cancers and other adverse health effects, including elevated liver enzymes and birth defects, had been observed among workers exposed to such

⁶⁰ 3M Chronology – Fluorochemicals in Blood, Aug. 26, 1977, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1144.pdf>.

⁶¹ The Effects of Continuous Aqueous Exposure to 78.03 on Hatchability of Eggs and Growth and Survival of Fry of Fathead Minnow, June 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1176.pdf>.

⁶² Ninety-Day Subacute Rhesus Monkey Toxicity Study, Dec. 18, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1191.pdf>; Aborted FC95 Monkey Study, Jan. 2, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1193.pdf>.

⁶³ Acute Oral Toxicity (LD₅₀) Study in Rats (FC-143), May 5, 1978, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1170.pdf>; FC-95, FC-143 and FM-3422 – 90 Day Subacute Toxicity Studies Conducted at IRDC – Review of Final Reports and Summary, Mar. 20, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1199.pdf>.

⁶⁴ Memorandum from R.A. Prokop to J.D. Lazerte re: Disclosure of Information on Levels of Fluorochemicals in Blood, July 26, 1979, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX2723.pdf>.

materials, including at least PFOA and PFOS, but such data was not published, provided to governmental entities as required by law, or otherwise publicly disclosed at the time.

201. In 1983, 3M researchers concluded that concerns about PFAS “give rise to concern for environmental safety,” including “legitimate questions about the persistence, accumulation potential, and ecotoxicity of fluorochemicals in the environment.”⁶⁵ That same year, 3M completed a study finding that PFOS caused the growth of cancerous tumors in rats.⁶⁶ This finding was later shared with DuPont and led them to consider whether “they may be obliged under their policy to call FC-143 a carcinogen in animals.”⁶⁷

202. In 1984, 3M documented a trend of increasing levels of PFOS in the bodies of 3M workers, leading one of the company’s medical officers to warn in an internal memo: “we must view this present trend with serious concern. It is certainly possible that . . . exposure opportunities are providing a potential uptake of fluorochemicals that exceeds excretion capabilities of the body.”⁶⁸

203. A 1997 material safety data sheet (“MSDS”) for a non-AFFF product made by 3M listed its only ingredients as water, PFOA, and other perfluoroalkyl substances and warned that the product includes “a chemical which can cause cancer.” The MSDS cited “1983 and 1993 studies conducted jointly by 3M and DuPont” as support for this statement. On information and belief, the MSDS for 3M’s AFFF products did not provide similar warnings or information.

⁶⁵ 3M Environmental Laboratory (EE & PC), Fate of Fluorochemicals - Phase II, May 20, 1983, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1284.pdf>.

⁶⁶ Two Year Oral (Diet) Toxicity/Carcinogenicity Study of Fluorochemical FC-143 in Rats, Volume 1 of 4, Aug. 29, 1987, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1337.pdf>.

⁶⁷ Memorandum from R.G. Perkins to F.D. Griffith re: Summary of the Review of the FC-143 Two-Year Feeder Study Report to be presented at the January 7, 1988 meeting with DuPont, January 5, 1988, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1343.pdf>.

⁶⁸ Memorandum from D.E. Roach to P.F. Riehle re: Organic Fluorine Levels, Aug. 31, 1984, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1313.pdf>.

x. 3M Hid What They Knew from the Government and the Public.

204. Federal law requires chemical manufacturers and distributors to immediately notify the EPA if they have information that “reasonably supports the conclusion that such substance or mixture presents a substantial risk of injury to health or the environment.” Toxic Substances Control Act (“TSCA”) § 8(e), 15 U.S.C. § 2607(e).

205. In April 2006, 3M agreed to pay EPA a penalty of more than \$1.5 million after being cited for 244 violations of the TSCA, which included violations for failing to disclose studies regarding PFOS, PFOA, and other PFCs dating back decades.

206. On information and belief, 3M knew or should have known that AFFF containing PFOS would very likely injure and/or threaten public health and the environment, even when used as intended or directed.

207. 3M failed to warn of these risks to the environment and public health, including the impact of its AFFF on the quality of unprotected water sources.

208. 3M was sophisticated and knowledgeable in the art and science of designing, formulating, and manufacturing AFFF. 3M understood far more about the properties of its AFFF—including the potential hazards they posed to human health and the environment—than any of their customers. Still, 3M declined to use its sophistication and knowledge to design safer products.

I. The Impact of PFOS on the Environment and Human Health Is Finally Revealed

209. As described above, 3M failed to comply with its obligations to notify EPA about the “substantial risk of injury to health or the environment” posed by its AFFF Products. *See* TSCA § 8(e).

210. Despite decades of research, 3M first shared its concerns with EPA in the late 1990s. In a May 1998 report submitted to EPA, “3M chose to report simply that PFOS had been found in the blood of animals, which is true but omits the most significant information,” according to a former 3M employee.⁶⁹

211. On information and belief, 3M began in 2000 to phase out its production of products that contained PFOS and PFOA in response to pressure from the EPA.

212. Once the truth about PFOS and PFOA was revealed, researchers began to study the environmental and health effects associated with them, including a “C8 Science Panel” formed out of a class action settlement arising from contamination from DuPont’s Washington Works located in Wood County, West Virginia.

213. The C8 panel consisted of three epidemiologists specifically tasked with determining whether there was a probable link between PFOA exposure and human diseases. In 2012, the panel found probable links between PFOA and kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, pregnancy-induced hypertension (including preeclampsia), and hypercholesterolemia.

214. Human health effects associated with PFOS exposure include immune system effects, changes in liver enzymes and thyroid hormones, low birth weight, high uric acid, and high cholesterol. In laboratory testing on animals, PFOA and PFOS have caused the growth of tumors, changed hormone levels, and affected the function of the liver, thyroid, pancreas, and immune system.

215. The injuries caused by PFAS can arise months or years after exposure.

⁶⁹ Letter from R. Purdy, Mar. 28, 1999, *available at* <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1001.pdf>.

216. At all relevant times, 3M, through its acts and/or omissions, controlled, minimized, trivialized, manipulated, and/or otherwise influenced the information that was published in peer-review journals, released by any governmental entity, and/or otherwise made available to the public relating to PFAS in human blood and any alleged adverse impacts and/or risks associated therewith, effectively preventing the public from discovering the existence and extent of any injuries/harm as alleged herein.

217. On May 2, 2012, the EPA published its Third Unregulated Contaminant Monitoring Rule (“UCMR3”), requiring public water systems nationwide to monitor for thirty contaminants of concern between 2013 and 2015, including PFOS and PFOA.⁷⁰

218. In the May 2015 “Madrid Statement on Poly- and Perfluoroalkyl Substances (PFAS’s),” scientists and other professionals from a variety of disciplines, concerned about the production and release into the environment of PFOA, called for greater regulation, restrictions, limits on the manufacture and handling of any PFOA containing product, and to develop safe non-fluorinated alternatives to these products to avoid long-term harm to human health and the environment.⁷¹

219. On May 25, 2016, the EPA released a lifetime health advisory (HAs) and health effects support documents for PFOS and PFOA.⁷² See Fed. Register, Vol. 81, No. 101, May 25, 2016. The EPA developed the HAs to assist governmental officials in protecting public health when PFOS and PFOA are present in drinking water. The EPA HAs identified the concentration

⁷⁰ *Revisions to the Unregulated Contaminant Monitoring Regulation (UCMR 3) for Public Water Systems*, 77 Fed. Reg. 26072 (May 2, 2012).

⁷¹ Blum A, Balan SA, Scheringer M, Trier X, Goldenman G, Cousins IT, Diamond M, Fletcher T, Higgins C, Lindeman AE, Peaslee G, de Voogt P, Wang Z, Weber R. 2015. The Madrid statement on poly- and perfluoroalkyl substances (PFASs). *Environ Health Perspect* 123:A107–A111; <http://dx.doi.org/10.1289/ehp.1509934>.

⁷² See Fed. Register, Vol. 81, No. 101, May 25, 2016, Lifetime Health Advisories and Health Effects Support Documents for Perfluorooctanoic Acid and Perfluorooctane Sulfonate.

of PFOS and PFOA in drinking water at or below which adverse health effects are not anticipated to occur over a lifetime of exposure at 0.07 ppb or 70 ppt. The HAs were based on peer-reviewed studies of the effects of PFOS and PFOA on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations exposed to PFOS. These studies indicate that exposure to PFOS and PFOA over these levels may result in adverse health effects, including:

- f. Developmental effects to fetuses during pregnancy or to breastfed infants (e.g., low birth weight, accelerated puberty, skeletal variations);
- g. Cancer (testicular and kidney);
- h. Liver effects (tissue damage);
- i. Immune effects (e.g., antibody production and immunity);
- j. Thyroid disease and other effects (e.g., cholesterol changes).

220. In addition, PFOS and PFOA are hazardous materials because they pose a “present or potential threat to human health.”⁷³

221. In 2016, the National Toxicology Program of the United States Department of Health and Human Services (“NTP”) and the International Agency for Research on Cancer (“IARC”) both released extensive analyses of the expanding body of research regarding the adverse effects of PFCs. The NTP concluded that both PFOA and PFOS are “presumed to be an immune hazard to humans” based on a “consistent pattern of findings” of adverse immune

⁷³ *Id.*; see also *National Ass’n for Surface Finishing v. EPA*, 795 F.3d 1, 3, 6 (D.C. Cir. 2015) (referring to PFOS as a “toxic compound” and a “hazardous chemical.”).

effects in human (epidemiology) studies and “high confidence” that PFOA and PFOS exposure was associated with suppression of immune responses in animal (toxicology) studies.⁷⁴

222. IARC similarly concluded that there is “evidence” of “the carcinogenicity of . . . PFOA” in humans and in experimental animals, meaning that “[a] positive association has been observed between exposure to the agent and cancer for which a causal interpretation is . . . credible.”⁷⁵

223. California has listed PFOA and PFOS to its Proposition 65 list as a chemical known to cause reproductive toxicity under the Safe Drinking Water and Toxic Enforcement Act of 1986.⁷⁶

224. The United States Senate and House of Representatives passed the National Defense Authorization Act in November 2017, which included \$42 Million to remediate PFC contamination from military bases, as well as devoting \$7 Million toward the Investing in Testing Act, which authorizes the Center for Disease Control and Prevention (“CDC”) to conduct a study into the long-term health effects of PFOA and PFOS exposure.⁷⁷ The legislation

⁷⁴ See U.S. Dep’t of Health and Human Services, Nat’l Toxicology Program, *NTP Monograph: Immunotoxicity Associated with Exposure to Perfluorooctanoic Acid or Perfluorooctane Sulfonate* (Sept. 2016), at 1, 17, 19, available at https://ntp.niehs.nih.gov/ntp/ohat/pfoa_pfos/pfoa_pfosmonograph_508.pdf

⁷⁵ See Int’l Agency for Research on Cancer, IARC Monographs: *Some Chemicals Used as Solvents and in Polymer Manufacture* (Dec. 2016), at 27, 97, available at <http://monographs.iarc.fr/ENG/Monographs/vol110/mono110.pdf>.

⁷⁶ California Office of Environmental Health Hazard Assessment, *Chemicals Listed Effective Nov. 10, 2017 as Known to the State of California to Cause Reproductive Toxicity: Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS)*, Nov. 9, 2017, available at <https://oehha.ca.gov/proposition-65/cmr/chemicals-listed-effective-november-10-2017-known-state-california-cause>.

⁷⁷ National Defense Authorization Act for Fiscal Year 2018, H.R. 2810, 115th Congress (2017), available at <https://www.congress.gov/115/plaws/publ91/PLAW-115publ91.pdf>.

also required that the Department of Defense submit a report on the status of developing a new military specification for AFFF that did not contain PFOS or PFOA.⁷⁸

225. In February 2018, the Wisconsin Department of Natural Resources (“WDNR”) stated that PFAS compounds meet the definition of hazardous substance and/or environment pollution under Wis. Stat. § 292.01. Therefore, persons responsible for the discharge of PFAS to waters of the State of Wisconsin were required to immediately notify the state, conduct a site investigation, determine the appropriate clean-up standards and perform the necessary response actions. Wis. Admin. Code chaps. NR 700-754. The non-industrial direct contact soil residual contaminant levels (RCLs) for both PFOA and PFOS is 1.26 mg/kg. The industrial direct contact RCL for both PFOA and PFOS is 16.4 mg/kg.⁷⁹

226. Wisconsin currently follows the USEPA HAL of 70 ppt for combined PFOA and PFOS levels.

227. In June 2018, the Agency for Toxic Substances and Disease Registry (“ATSDR”) and EPA released a draft toxicological profile for PFOS and PFOA and recommended the drinking water advisory levels be lowered to 11 ppt for PFOA and 7 ppt for PFOS.⁸⁰

228. On February 20, 2020, the EPA announced a proposed decision to regulate PFOA and PFOS under the Safe Drinking Water Act, which the agency characterized as a “key milestone” in its efforts to “help communities address per- and polyfluoroalkyl substances

⁷⁸ *Id.*; see also U.S. Department of Defense, *Alternatives to Aqueous Film Forming Foam Report to Congress*, June 2018, available at <https://www.denix.osd.mil/derp/home/documents/alternatives-to-aqueous-film-forming-foam-report-to-congress/>.

⁷⁹ Department of Natural Resources, *Wisconsin DNR’s Remediation and Redevelopment Program Has Authority to Regulate Emerging Contaminants- including PFAS Compounds* (last visited September 25, 2018). <https://dnr.wi.gov/topic/brownfields/documents/bsg/1802PFCarticle.pdf>

⁸⁰ ATSDR, *Toxicological Profile for Perfluoroalkyls: Draft for Public Comment* (June 2018), available at <https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>.

(PFAS) nationwide.”⁸¹ Following a public comment period on its proposed decision, the EPA will decide whether to move forward with the process of establishing a national primary drinking water regulation for PFOA and PFOS.

J. Use of 3M’s PFOS-Containing AFFF at the AFTC

229. The AFTC is an active fire suppressant training, testing, research, and development facility located at 1 Stanton Street in Marinette, Wisconsin.

230. The AFTC encompasses 380 acres including a section known as the Outdoor Testing Area, consisting of 9 acres used in connection with the Fire Training School, Research and Development and Quality Testing activities. The remaining area of the site is used for equipment manufacturing, warehousing, offices, classrooms, and parking.

231. The Outdoor Testing Area was constructed in 1961. Since then, it has been used to perform testing, demonstrations, and training on a range of fire suppressants.

232. The area near the AFTC is drained by ditches, which are hydraulically connected with the groundwater in Marinette, Wisconsin.⁸²

233. Water-levels measured in the AFTC monitoring well network, which is focused in the central and northeast portion of the facility, predict flow toward the east or northeast.

234. The original owner of the AFTC, the Ansul Chemical Company (“Ansul”), first began using the Outdoor Testing Area to test AFFF in or around 1962. The AFFF tested at that time, however, was not Ansul’s but was a PFOS-containing foam concentrate manufactured by

⁸¹ Press Release, *EPA Announces Proposed Decision to Regulate PFOA and PFOS in Drinking Water*, Feb. 20, 2020, available at <https://www.epa.gov/newsreleases/epa-announces-proposed-decision-regulate-pfoa-and-pfos-drinking-water>.

⁸² Tyco FireProducts LP, Revised Site Investigation Work Plan, April 2018, <https://dnr.wi.gov/botw/GetActivityDetail.do?siteId=1552500&adn=0238580694>

3M and tested in combination with a dry chemical. Soon after that initial testing, Ansul became a distributor of 3M's AFFF products and continued testing them into the 1970's.

235. The AFTC began initial site investigation activities in 1993 to delineate the extent of soil and groundwater contamination resulting from a leaking underground storage tank. Since then, several investigation phases including a groundwater monitoring program have been conducted.⁸³

236. Petroleum and petroleum-related products as fire accelerants were used as part of the firefighting training and product testing activities at the AFTC. Initial investigation activities were implemented upon removal of a 564-gallon gasoline UST in 1992.⁸⁴

237. In response to the Groundwater Sampling Work Plan, the WDNR approved a list of monitoring wells.

238. Tyco performed testing on the AFTC property in 2013 and 2014, and the results indicated that PFOS and PFOA were present in the soil and groundwater at the Site and in off-Site potable wells.⁸⁵

239. The AFTC is conducting corrective actions pursuant to a 2009 Administrative Order on Consent with the US EPA. The Order requires the AFTC's current owner, Tyco, to implement institutional controls, soil remediation, sediment removal from the Menominee River, as well as on-site groundwater management. Tyco installed a barrier made of sheet pile and a slurry wall around the entire facility border to contain arsenic-polluted groundwater on-site.

⁸³ Letter submitted July 5, 2016 and 2016 Investigation Report
<https://dnr.wi.gov/botw/GetActivityDetail.do?siteId=1552500&adn=0338001345>.

⁸⁴ *Id.*

⁸⁵ <http://marinette.tycofpp.com/faqs.php>.

Tyco is also replacing or removing parts of their storm water sewer and industrial sewer systems to prevent groundwater penetration into the outfall system.

240. In 2016, under investigation to delineate the extent of volatile organic compound (VOC) constituents, a subset of samples were analyzed for PFAS. The PFAS analysis of 38 groundwater samples from vertical aquifer profiling (VAP) boring locations at the Site indicated the presence of PFAS compounds. PFAS analysis of 16 shallow soil samples in the Outdoor Testing Area also indicated the presence of these compounds. Groundwater and soil data from these investigation activities were submitted to Wisconsin Department of Natural Resources (“WDNR”) in November 2016.⁸⁶

241. Investigation of PFAS in off-Site groundwater began in 2017. This sampling identified PFAS in groundwater extending southeast, east and northeast from the Site. The groundwater data collected showed that PFAS concentrations detected in off-Site groundwater is due to PFAS transport through groundwater and historical stormwater runoff to the on-Site and off-Site ditches. Investigation of off-Site groundwater has included the sampling of approximately 140 private wells located predominantly to the southeast of the Site, including Plaintiff’s private well.

242. In November 2017, Tyco launched an investigation of PFAS, conducted under the oversight of the WDNR and the Wisconsin Department of Health Services (“WDHS”).⁸⁷

⁸⁶ Tyco FireProducts LP, Site Investigation Work Plan, March 2018, <https://dnr.wi.gov/botw/GetActivityDetail.do?siteId=1552500&adn=0238580694>.

⁸⁷ Tyco FireProducts LP, Site Investigation Work Plan, <https://dnr.wi.gov/botw/GetActivityDetail.do?siteId=1552500&adn=0238580694>.

243. A total of 24 subsurface borings were drilled, with 98 groundwater samples collected and the combined PFOA and PFOS concentrations detected ranged from non-detect to 1,653 ppt.

244. Four samples of standing water within ditches on the AFTC were collected and the combined PFOA and PFOS concentrations detected ranged from 417 to 4,620 ppt.

245. Testing also began on select private wells within the investigation area. Based on the first sets of groundwater investigation results, the initial sampling area (Phase 1) was defined. In Phase 1, Zone A, 8 well samples PFOA and PFOS concentrations detected more than HAL 70 ppt.

246. On December 17, 2017, a public meeting in the Town of Peshtigo was held with the WDNR and WDHS to inform the residents of the investigation area about the work underway, and the plan to study private drinking water wells. Bottled water was offered to all users of drinking water wells within the private well sampling area.

247. The study area was expanded (Phase II). Since December 2017, 137 drinking water wells have been sampled. The combined PFOA and PFOS results were as follows: detections greater than the HAL (70 ppt): 11 wells (detections ranged from 73 to 1,900 ppt) and detections less than the HAL: 29 wells (detections ranged from 3.9 to 49 ppt). Point of Entry Treatment (POET) systems were offered to owners/users of drinking water wells where PFOA and PFOS concentrations were greater than the HAL.

248. On January 23, 2018, Tyco held a second public meeting in the Town of Peshtigo with WDNR and WDHS to present the sampling data to residents in the study area, answer questions, and discuss plans for additional studies in the area.

249. At the January 23, 2018, meeting, Tyco stated that sampling results found detections greater than the HAL in 8 sample wells, with detections ranging from 84 to 690 ppt.⁸⁸

250. In March 2018, Tyco submitted a Site Investigation Work Plan to the DNR which provided plans for additional investigation of groundwater, soil, ditches, and surface water. Tyco also submitted a Long-Term Potable Well Sampling Plan with a schedule for additional sampling of drinking water wells. The WDNR provided comments on those plans, and updated documents were prepared in response to those comments. The WDNR approved the updated documents.

251. In March 2018, Tyco contacted all the drinking water well owners/users within the sampling area to collect additional spring 2018 samples.

252. On April 30 and May 1, 2018, Tyco collected groundwater samples for PFAS analyses from 7 existing monitoring wells. One sample was collected of combined groundwater influent to the existing groundwater treatment system. PFOA concentrations detected ranged from 130 to 9,100 ng/L. PFOS concentrations detected ranged from 25 to 650ng/L.⁸⁹

253. In June 2018 Tyco conducted testing of groundwater for PFAS compounds at their Stanton Street facility in Marinette. Results indicated the presence of PFAS in groundwater samples collected at the Stanton Street facility.

254. Tyco said it found chemicals in groundwater a few miles away in monitoring wells at its riverside plant. The wells were installed as part of a separate toxic cleanup of arsenic by the company.⁹⁰

⁸⁸ Community Meeting Slides, January 23, 2018

⁸⁹ Stanton Street Groundwater Sample Results, June 8, 2018

⁹⁰ Bergquist, Lee. *New evidence of groundwater pollution turning up near Lake Michigan at Tyco plant in Marinette.* Milwaukee Journal Sentinel. June 18, 2018. <https://www.jsonline.com/story/news/local/wisconsin/2018/06/18/new-evidence-groundwater-pollution-turning-up-near-tyco-plant/703136002/>

255. Elevated levels of the chemicals have shown up in Marinette's wastewater treatment system during tests in November and May, according to the City of Marinette and WDNR records. After treating the waste, effluent containing PFCs are released into the river.

256. In its July 17, 2018, online update on contaminants migrating from its operations in northeastern Wisconsin, Tyco said PFAS has been detected in two ditches that run through and near the AFTC and lead to Green Bay.

257. One of those ditches flows into Green Bay at Runnoe Park near the University of Wisconsin-Marinette; the other flows to Little River, south of the city.⁹¹ Some water samples were taken near Lake Michigan, according to Steve Ales, the DNR's field operations manager for remediation and redevelopment.

258. On July 19, 2018, the WDHS recommended people in affected areas within the Marinette City Limits and the Town of Peshtigo to use alternate water that does not contain PFAS above the U.S. EPA Health Advisory Level of 70 parts per trillion (ppt) for gardens.

259. Trace amounts of the chemicals have also been detected in Marinette's municipal drinking water, according to city and DNR records. 3M's chemicals are flowing into Lake Michigan and contaminating the water and aquatic life, including fish.

260. Tyco has told the DNR that some samples contain concentrations of 2,000 to 3,000 parts per trillion. Tyco reported that four samples of standing water in ditches at the company's fire training facility had concentrations of PFOA or PFOS ranging between 417 and

⁹¹ Bergquist, Lee. *In new sign of troubles, manufacturer seeks to rid chemicals in ditches that flow into Green Bay*. Milwaukee Journal Sentinel. July 19, 2018. <https://www.jsonline.com/story/news/2018/07/19/tyco-unit-johnson-controls-wants-extract-pollutants/797837002/>

4,620 parts per trillion. Tyco has also said it discovered the compounds at a second location — in well samples at its manufacturing plant along the Menominee River, a tributary of Green Bay.⁹²

261. The highest levels of PFOA and PFOS in groundwater in Wisconsin have been detected at the AFTC. Reported total concentrations are as high as 202 µg/l (micrograms per liter) – 2,800 times higher than the EPA’s Health Advisory Level of only 0.07 µg/l for the compounds combined. The drinking water wells of dozens of nearby families have also tested positive for contamination.⁹³

262. Plaintiff has been injured as a result of consuming water with elevated levels of PFCs, including PFOS. As the sole manufacturer of AFFF containing PFOS, 3M’s products would have been the source of any PFOS found in the water consumed by Plaintiff.

263. Plaintiff has suffered exposure, personal injury, bioaccumulation of PFCs in his blood which causes known cancers and diseases, property damage and the diminution of property value as a result of the PFC contamination caused by AFFF, of the municipal and private water supplies.

264. As a result of years of consuming contaminated water, Plaintiff, as a resident of Marinette, has been unknowingly exposed for many years to PFCs at concentrations hazardous to his health through the ingestion of PFOA and PFOS.

265. The property of Plaintiff has been damaged as a result of the presence of PFCs in the homes, soil, surrounding property, and potable water supply.

266. Plaintiff seeks recovery from Defendants for damages and losses suffered by the Plaintiff, who has suffered injuries as a direct and proximate result of exposure to and

⁹² Id.

⁹³ <https://cswab.org/wisconsin-to-address-pfoa-pfos-and-other-groundwater-contaminants/>

consumption of PFOS-contaminated water from the private drinking water supply, in an amount to be determined at trial, exclusive of interest, costs, and attorneys' fees.

Plaintiff's Exposure and Damages

267. The highest levels of PFOA and PFOS in groundwater in Wisconsin have been detected at the AFTC. Reported total concentrations are as high as 202 µg/l (micrograms per liter) – 2,800 times higher than the EPA's Health Advisory Level of only 0.07 µg/l for the compounds combined. The drinking water wells of dozens of nearby families have also tested positive for contamination.⁹⁴

268. Plaintiff has been injured as a result of consuming water with elevated levels of PFCs, including PFOS. As the sole manufacturer of AFFF containing PFOS, 3M's products would have been the source of any PFOS found in the water consumed by Plaintiff.

269. Plaintiff has suffered exposure, personal injury, bioaccumulation of PFCs in their blood which causes known cancers and diseases, property damage and the diminution of property value as a result of the PFC contamination caused by AFFF, of the municipal and private water supplies.

270. As a result of years of consuming contaminated water, Plaintiff, as a resident of Marinette has been unknowingly exposed for many years to PFCs at concentrations hazardous to his health through the ingestion of PFOA and PFOS.

271. The properties of the Plaintiff has been damaged as a result of the presence of PFCs in their homes, their soil, surrounding property and potable water supply.

272. Plaintiff seeks recovery from Defendants for damages and losses suffered by the Plaintiff, who suffered injuries as a direct and proximate result of exposure to and consumption

⁹⁴ <https://cswab.org/wisconsin-to-address-pfoa-pfos-and-other-groundwater-contaminants/>

of PFOS-contaminated water from the private drinking water supplies, in an amount to be determined at trial, exclusive of interest, costs, and attorneys' fees.

CAUSES OF ACTION
AS AND FOR A FIRST CAUSE OF ACTION: NEGLIGENCE

273. Plaintiff hereby repeats, realleges, and reiterates each and every allegation in the preceding paragraphs as if fully restated herein.

274. This cause of action is brought pursuant to Wisconsin law.

275. Defendants failed to employ reasonable care which a reasonably prudent person should use under the circumstances by transporting, manufacturing, consuming, using, utilizing, storing, handling and/or disposing of toxic substances, including but not limited to PFCs and PFOS, in a way permitting its release into the soil and groundwater.

276. The contamination of the groundwater supply with PFOS was a foreseeable consequence of 3M's actions at the AFTC.

277. Defendants owed Plaintiff a cognizable duty to exercise reasonable care in the transporting, testing, manufacturing, consuming, using, utilizing, storing, handling and/or disposing of toxic substances, including but not limited to PFCs and PFOS.

278. Upon learning of a release of toxic substances, including but not limited to PFCs and PFOS, Defendants owed Plaintiff a duty to act reasonably to remediate, contain, and eliminate the release before it contaminated and reached Plaintiff's well.

279. Defendants breached that duty by failing to act reasonably in the transporting, manufacturing, consuming, using, utilizing, storing, handling and/or disposing of toxic substances, including but not limited to PFCs and PFOS.

280. Defendants failed to take reasonable, adequate and sufficient steps or action to eliminate, correct or remedy a release of PFCs and PFOS after it occurred.

281. Upon learning of a release of toxic substances, including but not limited to PFCs, Defendants owed Plaintiff a duty to timely notify Plaintiff that the aforementioned release in the vicinity of the AFTC had occurred.

282. Defendants breached that duty by failing to timely notify Plaintiff of any releases of toxic substances, including but not limited to PFCs and PFOS, into the environment in the vicinity of the AFTC, and consequently, in the vicinity of Plaintiff's well.

283. Defendants negligently breached its duties to Plaintiff to ensure that their transporting, manufacturing, consuming, using, utilizing, storing, handling and/or disposing of toxic substances, including but not limited to PFCs and PFOS, was carried out in a safe and sufficiently secure manner so as to prevent the release of toxic substances, including but not limited to PFCs and PFOS, into the environment surrounding their facilities, and consequently, Plaintiff's drinking water wells.

284. Defendants' breach of its duties was the direct, sole and proximate cause of Plaintiff's damages and imminent, substantial and impending harm to Plaintiff's well.

285. As a direct result of the foregoing, Plaintiff seeks compensatory damages in a sum to be determined by a jury at the time of trial.

AS AND FOR A SECOND CAUSE OF ACTION:
TRESPASS

286. Plaintiff hereby repeats, realleges, and reiterates each and every allegation in the preceding paragraphs as if fully restated herein.

287. This cause of action is brought pursuant to the laws of Wisconsin.

288. Defendant Tyco/Ansul, as described above, is an owner of real property with the right of possession.

289. Defendants Tyco/Ansul manufacture and use their products in researching and training exercises in the site with knowledge that large quantities of toxic PFOA and PFOS would contaminate the air, soil and groundwater.

290. 3M manufactured and used their products in researching and training exercises in the site with knowledge that large quantities of toxic PFOS would contaminate the air, soil and groundwater.

291. Defendants allowed PFCs and PFOS to travel to the surrounding groundwater, causing contaminations of various private wells, including Plaintiff's, in various locations, in varying amounts at various times.

292. Defendants owed Plaintiff a cognizable duty to exercise reasonable care to ensure that PFCs and PFOS used and disposed of at the AFTC was disposed of reasonably and properly so as not to discharge PFCs and PFOS into the environment.

293. At the time the above-described, affirmative, voluntary, and intentional acts were performed by Defendants, Defendants had good reason to know or expect that large quantities of PFCs and PFOS would and/or could be introduced into the person and property of Plaintiff.

294. The above-described affirmative, voluntary, and intentional acts were performed with the willful intent to cause PFCs and PFOS to be disbursed onto the land.

295. Defendants' negligent, reckless, willful, and/or wanton actions and/or intentional failures to act caused an unknown quantity of PFCs and PFOS to be released into the drinking water for the Plaintiff.

296. Defendants' willful, wanton, and intentional failure to act and/or their affirmative choices of actions and following courses of actions have caused PFCs and PFOS to enter and

trespass upon the land and realty of Plaintiff and cause an injury to their possession and/or right of possession.

297. Plaintiff has not consented and does not consent to the trespass and contamination alleged herein. Defendants knew or reasonably should have known that Plaintiff did not and do not consent to this trespass.

298. These voluntary actions resulted in the immediate and continued trespass, injury and damage to Plaintiff, his property and right of possession of the property.

299. Further, Defendants' actions in introducing unknown quantities of PFCs and PFOS into the drinking water of Marinette County and, consequently, the person and property of Plaintiff were done with actual malice, and in wanton, willful and/or reckless disregard for Plaintiff's rights, health, and property.

300. Additionally, and/or alternatively, Defendants' decisions to delay and the resulting delay in taking any affirmative action to eliminate, correct, and/or remedy the PFCs and PFOS release and contamination after having knowledge and notice of said contamination were done with actual malice, and in wanton, willful and/or reckless disregard for the rights, health, and property of Plaintiff.

301. Accordingly, Plaintiff seeks general damages from Defendants, in an amount to be determined at trial, directly resulting from his injuries in a sufficient amount to compensate them for the injuries and losses and to restore Plaintiff to his original position, including but not limited to the difference between the current value of their property and such value if the harm had not been done, the cost of repair or restoration, the value of the use of the continuous trespass, injury to persons which includes but is not limited to pain and suffering and direct,

consequential, and nominal damages flowing from the trespass which are the natural and proximate result of Defendants' conduct in an amount to be proved at trial.

AS AND FOR A THIRD CAUSE OF ACTION:
ABNORMALLY DANGEROUS ACTIVITY
AND ABSOLUTE AND STRICT LIABILITY

302. Plaintiff hereby repeats, realleges, and reiterates each and every allegation in the preceding paragraphs as if fully restated herein.

303. Defendants' manufacturing, operational, and disposal practices as it related to material contaminated with PFCs and PFOS and/or other ultra-hazardous toxins was negligent, reckless, and/or intentional and constituted an ultra-hazardous or abnormally dangerous activity for which Defendants are strictly liable.

304. Defendants' manufacture, use, mishandling, and disposal of material that contained PFCs and PFOS was inappropriate, given PFCs and PFOS toxicity and danger to human health, at the AFTC due to the Facility's proximity to the sources of drinking water (both municipal and private wells).

305. As a result, Defendants allowed or caused these ultra-hazardous and abnormally dangerous substances to leach into the land and ground water surrounding the AFTC, including the potable water supply relied upon by Plaintiff.

306. Further, Defendants' contamination of the potable water supply with PFCs and PFOS creates the likelihood for personal injury and property damage to individuals who use and rely upon the water.

307. Defendants' manufacture, use, mishandling, and disposal of PFCs and PFOS and its reckless disregard for the consequences of their actions caused the existence of a high degree

of harm to both the Plaintiff and their property. Given the nature of PFCs and PFOS, the likelihood of this harm was great.

308. The risk of such activities outweighs any value associated with the same. As the result of the said ultra-hazardous or abnormally dangerous activities, Plaintiff has suffered damages and imminent, substantial, and impeding harm to their health, their families, to the value of their home and property, and Plaintiff has expended or will be forced to expend significant resources to safeguard their health and their property, obtain monitoring, testing, remediating services or equipment, as well as health monitoring indefinitely for years and decades into the future.

309. Defendants are strictly liable in tort for personal injury and property damage sustained by Plaintiff.

310. Accordingly, Plaintiff seeks general damages from Defendants, in an amount to be determined at trial, directly resulting from the their injuries in a sufficient amount to compensate them for the injuries and losses and to restore Plaintiff to his original position, including, but not limited to the difference between the current value of his property and such value if the harm had not been done, the cost of repair or restoration, the value of the use of the continuous trespass, injury to persons, and direct, consequential, and nominal damages flowing from the nuisance and trespass which are the natural and proximate result of Defendants' conduct in an amount to be proved at trial.

AS AND FOR A FOURTH CAUSE OF ACTION:
PRIVATE NUISANCE

311. Plaintiff hereby repeats, realleges, and reiterates each and every allegation in the preceding paragraphs as if fully restated herein.

312. This cause of action is brought pursuant to Wisconsin law.

313. Defendants' reckless, intentional and unreasonable, abnormally dangerous, and/or negligent acts and omissions, as alleged above, resulted in the discharge of PFCs, including PFOS, into the environment, contaminating the municipal and private wells from which the Plaintiff obtained his drinking water.

314. The discharge of PFCs and PFOS into the environment resulted in the contamination of the Plaintiff's groundwater and water supply with hazardous levels of PFOS.

315. The contamination of the groundwater and water supply has prevented and continues to prevent Plaintiff from consuming or using the water at their property or residence and constitutes a substantial interference with the right of Plaintiff.

316. The inability to use potable drinking water at his residence has caused Plaintiff significant inconvenience and expense.

317. By reason of the foregoing, Defendants are liable to Plaintiff for the damages that they have suffered as a result of Defendants' actions, the amount of which will be determined at trial, plus reasonable attorneys' fees and costs.

318. Accordingly, Plaintiff seeks general damages from Defendants, in an amount to be determined at trial, directly resulting from the their injuries in a sufficient amount to compensate them for the injuries and losses and to restore Plaintiff to their original position, including, but not limited to the difference between the current value of their property and such value if the harm had not been done, the cost of repair or restoration, the value of the use of the continuous trespass, injury to persons, and direct, consequential, and nominal damages flowing from the nuisance and trespass which are the natural and proximate result of Defendants' conduct in an amount to be proved at trial.

AS AND FOR A FIFTH CAUSE OF ACTION:
PRODUCTS LIABILITY – FAILURE TO WARN

319. Plaintiff hereby repeats, realleges, and reiterates each and every allegation in the preceding paragraphs as if fully restated herein.

320. This cause of action is brought pursuant to Wisconsin law.

321. Defendants knew or should have known that exposure to PFCs and PFOS was hazardous to the environment and to human health.

322. Defendants knew or should have known that the manner in which it was manufacturing and testing AFFF was hazardous to human health and the environment because it contained PFCs and PFOS.

323. Defendants knew or should have known that the manner in which it was manufacturing AFFF containing PFCs and PFOS would, due to the proximity of the AFTC, result in the contamination of the environment, groundwater, and the municipal and private water supplies in Marinette County.

324. Defendants had the duty to warn of the hazards associated with AFFF entering and poisoning the environment and groundwater because it knew of the dangerous, hazardous and toxic properties of the AFFF containing PFCs and PFOS.

325. Defendants failed to provide sufficient warning that the use, testing and storage of Defendants' products would cause the product to be released into the environment and cause the contamination of the environment, groundwater, and drinking water, with PFCs and PFOS.

326. Further, this contamination led to the exposure and bioaccumulation of PFCs and PFOS in Plaintiff, and thereby increased their risk of developing numerous diseases as more fully set forth above.

327. Defendants' breach of its duty to timely notify Plaintiff's community and act reasonably in warning of the presence of PFCs and PFOS in AFFF, Plaintiff was forestalled from undertaking effective and immediate remedial measures, and Plaintiff has expended and/or will be forced to expend significant resources to test, monitor, and remediate the effects of Defendants' negligence for many years.

328. Adequate precautions, instructions and warnings could have reduced or avoided these foreseeable risks of harm to Plaintiff.

329. Had Defendants provided adequate warnings, Plaintiff could have taken measures to avoid or lessen his exposure.

330. Had Defendants provided adequate warnings to sensitive receptors, like those consuming water near its facilities, steps could have been taken to reduce or prevent the release of PFCs and PFOS into the environment, groundwater, and Plaintiff's drinking water.

331. Defendants' failure to warn was a direct and proximate cause of the environmental and health impacts from PFCs and PFOS that came from the use, storage and disposal of AFFF at the AFTC.

332. As such, Defendants' failure to provide adequate and sufficient warnings for the AFFF it manufactured, marketed, and sold renders that AFFF a defective product.

333. As a result of Defendants' conduct and the resulting contamination, the value and marketability of the properties owned by the Plaintiff has been and will continue to be diminished. Plaintiff and have suffered the need for and the cost of remediation of their properties and or mitigation systems for those properties, and the cost of alternative water.

334. As a result of the contamination, Plaintiff has lost use and enjoyment of his properties and have suffered annoyance and discomfort, inconvenience and annoyance as a consequence of the contamination of their properties by Defendants.

335. As a result of Defendants' conduct and the resulting contamination, Plaintiff has been injured in that their exposure to PFCs and PFOS, and potentially other toxic substances has caused him to develop illnesses associated with this exposure as more fully described and/or significantly increased their risk of developing those illnesses.

PUNITIVE DAMAGES

336. Plaintiff hereby repeats, realleges, and reiterates each and every allegation in the preceding paragraphs as if fully restated herein.

337. Upon information and belief, Defendants engaged in willful, wanton, malicious, and or/reckless conduct that caused the foregoing injuries, property damage, nuisances, and trespasses upon the person and property of Plaintiff, disregarding their protected rights.

338. Defendants' willful, wanton, malicious, and/or reckless conduct includes but is not limited to Defendants' failure to take all reasonable measures to ensure PFOS-containing materials would be effectively disposed of and not discharged into the surrounding environment and groundwater supplies.

339. Defendants have caused great harm to the property and water supply of Plaintiff and demonstrated an outrageous conscious disregard for their safety with implied malice, warranting the imposition of punitive damages.

340. Defendants committed each of the above-described acts and omissions knowingly, willfully, and with oppression, fraud and/or malice, in conscious disregard of the probable dangerous consequences of that conduct and its reasonably foreseeable impacts on

public health and welfare. Therefore, Plaintiff requests an award of punitive damages in an amount enough to punish Defendants and that fairly reflects the aggravating circumstances alleged herein. Defendants are strictly, jointly and severely liable for all such damages, and Plaintiff is entitled to recover all such damages and other relief as set forth below.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff demands judgment against 3M, and request the following relief from the Court:

- A. a declaration that Defendants acted with negligence, gross negligence, and/or willful, wanton, and careless disregard for the health, safety, and property of Plaintiff.
- B. An award of damages for all harmful health impacts suffered by Plaintiff caused by PFOS exposure.
- C. An award to Plaintiff of general, compensatory, exemplary, consequential, nominal, and punitive damages;
- D. An order for an award of attorney fees and costs, as provided by law;
- E. An award of pre-judgment and post-judgment interest as provided by law, and
- F. An order for all such other relief the Court deems just and proper.

JURY DEMAND

Plaintiff demands a trial by jury of any and all issues in this matter.

March 14, 2024

Respectfully submitted,

NAPOLI SHKOLNIK

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